DOCUMENT RESUME

ED 290 143 CS 211 003

AUTHOR Land, Warren; And Others
TITLE Effects of Peer Tutoring in Middle School English Classes.
INSTITUTION Mississippi State Univ., Mississippi State. Bureau of Educational Research and Evaluation.
PUB DATE 87
NOTE 52p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *English Instruction; Grade 6; Grade 7; *Instructional Effectiveness; Intermediate Grades; Junior High Schools; Middle Schools; *Peer Relationship; *Tutoring; *Tutors; *Writing Improvement; Writing Research; Writing Skills

ABSTRACT

To determine the effects of peer tutoring on tutors and tutees in middle school English classes, a study was conducted using pretest and posttest data of 120 students in a Mississippi middle school gathered from the following: (1) the California Achievement Test, 1977 Edition, Forms C and D; (2) teacher-assigned grades in English classes; (3) overall grade point average in all academic classes; and (4) the Survey of Pupil Opinion. A total of 60 sixth-grade students comprised the tutee sample, and 60 seventh-grade students made up the tutor sample, with each group divided in half and randomly assigned to experimental and control groups. The tutoring sessions were conducted for 10 minutes each day for a period of 6 weeks. Findings included a significant difference in teacher-assigned grades for tutees compared with students who were not tutees. No significant differences on any measure were found among tutors when compared with similar students who did not serve as tutors. The results support the hypothesis that the peer tutoring process improves grades assigned by teachers to the tutees, but the results do not support similar benefits for the tutors. (The document includes two tables. Appendixes include the Survey of Pupil Opinion and sample work sheets. Also appended are 24 references.) (SKC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED290143

EFFECTS OF PEER TUTORING IN MIDDLE SCHOOL ENGLISH CLASSES

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Warren Land
Larry Anderson
Joyce Polk
Laura Heffner

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Warren Land

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Mississippi State University
Educational Media Center
Bureau of Educational Research and Evaluation
College of Education
Mississippi State, Mississippi 39762

CS211003

BEST COPY AVAILABLE

ABSTRACT

EFFECTS OF PEER TUTORING IN
MIDDLE SCHOOL ENGLISH CLASSES

Making adequate provisions for the individual educational needs and interests of students in the classroom has long been a concern of educators. Peer tutoring has been used to improve learning opportunities for both the tutor and the tutee.

The advantages of the technique have been described in the literature. Few of the studies dealt with the middle school level or peer tutoring in English. Can peer tutoring be used as effectively at this grade and in this subject area?

This study was designed to investigate the effects of peer tutoring in a middle school English class on tutors and tutees as determined by (1) standardized English achievement test scores, (2) grades earned in English class, (3) student self concept, and (4) overall grade point average.

The population for this study consisted of 120 middle school students. The tutee sample consisted of 60 sixth-grade Level III students who were divided equally and randomly assigned to the experimental and to the control group. The tutor sample consisted of 60 seventh-grade Level I and Level II students who were divided equally and randomly assigned to the experimental and to the control group. The tutoring sessions were conducted for 10 minutes each day for a period of six weeks.

Pre- and Posttest data were gathered through the use of two instruments and the academic records of students. The California Achievement Test, 1977 Edition, was used to measure English achievement. The Survey of Pupils Opinion was used to measure student self concept, and academic records were used to measure English grades and overall grade point average.

The data were analyzed using analysis of variance to test the eight hypotheses formulated for the study. No significant difference was found at the .05 level when comparisons were made between standardized English achievement test scores, self concept, and overall grade point average for students who were tutees when compared with students who were not tutees. A significant difference was found at the .05 level when a comparison was made between teacher-assigned grades in English class for students who were tutees when compared with students who were not tutees in favor of the tutees.

No significant difference was found at the .05 level when comparisons were made between standardized English achievement test scores, teacher-assigned grade in English class, self concept, and overall grade point average for students who served as tutors when compared with similar students who did not serve as tutors.

TABLE OF CONTENTS

		Page
	List of Tables	iv
I.	NATURE AND SCOPE OF THE STUDY	1
	Introduction	1
	Statement of the Problem	2
	Hypotheses	2
	Rationale for the Study	4
	Limitations	6
II.	REVIEW OF RELATED LITERATURE	7
	The Effects of Tutoring on Motivation	7
	The Effects of Tutoring on Self-Concept	9
	The Effects of Tutoring on Achievement	12
	Summary	14
III.	METHODS AND PROCEDURES	16
	Subjects of the Study	16
	Data Gathering Instruments	17
	Teacher Assigned Grades in English Classes and Overall Grade Point Average in All Other Academic Classes	17
	Survey of Pupil Opinion	18
	California Achievement Test, 1977 Edition, Forms C and D	19
	Procedures	20
	Analysis of Data	23
IV.	ANALYSIS OF DATA	24
	Results of Analysis of Variance	24
V.	SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS	30
	Summary	30
	Conclusions	31
	Implications	31
	Recommendations	32
	Appendices	33
	References	45

LIST OF TABLES

Table		Page
1	Difference Between Experimental and Control Groups of Tutees on Teacher Assigned Grades in English, Overall Academic Grade Point Average, Self-Concept, and Standardized English Test Scores.	25
2	Difference Between Experimental and Control Groups of Tutors on Teacher Assigned Grades in English, Overall Academic Grade Point Average, Self-Concept, and Standardized English Test Scores.	28

NATURE AND SCOPE OF THE STUDY

Introduction

Peer tutoring has been used for years as a teaching/learning strategy both in school and in other settings. The ancient Greeks and the Romans used student tutors. Comenius (1592-1670) supported tutoring and felt that it was of definite benefit to both the tutor and the tutee. The Montessori system, the one-room schoolhouse, and the Lancastrian approach all used students to help teach other students.

Making adequate provisions for the individual educational needs and interests of students in the typical classroom has long been a concern of educators. This concern led to the use of various procedures and methods in the classroom. While improvements have been made in the educational process, much remains to be done especially in terms of satisfying the specific and varied individual student needs. When the educational needs of students are not met, they do not perform at a level consistent with their academic potential. Peer tutoring was a method that was used to more adequately meet the student needs and interests.

The use of peer tutoring as a teaching/learning strategy in the classroom has provided benefits for the students. The advantages of this process have been described in the literature. However, not many of the studies dealt with sixth and seventh grade middle school students or with the use of peer

tutoring in English classes. Are the positive results associated with this technique in other instructional settings available in a middle school English class?

This study was developed primarily to determine the benefits of peer tutoring in middle school English classes. Is motivation and enthusiam for learning increased for students in middle school English classes who are involved in the peer tutoring process? Do students involved in tutoring develop more positive self-concepts and attitudes toward school than those students not involved? How do the achievement levels in English compare for the students involved in tutoring with those who were not involved?

Statement of the Problem

This study was designed to determine the effects of peer tutoring in middle school English classes on the tutors and tutees as determined by teacher assigned grades in English classes, overall academic grade point average, self-concept as measured by the Survey of Pupil Opinion, and scores on a standardized English test as measured by the California Achievement Test, 1977 Edition.

Hypotheses

For statistical purposes the null hypotheses form was used.

1. There will be no significant difference in English achievement between the tutees and similar students who were not tutored as measured by teacher assigned grades.

2. There will be no significant difference in the overall grade point average between the tutees and similar students who were not tutored as measured by all teacher assigned academic grades.

3. There will be no significant difference between the self-concept of the tutees and similar students who were not tutored as measured by the Survey of Pupil Opinion (SURPO).

4. There will be no signigicant difference between the scores on a standardized English test for the tutees and similar students who were not tutored as measured by the California Achievement Test, 1977 Edition (CAT-77).

5. There will be no significant difference in English achievement between the tutors and similar students who did not serve as tutors as measured by teacher assigned grades.

6. There will be no significant difference in overall grade point average between the tutors and similar students who did not serve as tutors as measured by all teacher assigned academic grades.

7. There will be no significant difference between the self-concept of the tutors and similar students who did not serve as tutors as measured by the Survey of Pupil Opinion (SURPO).

8. There will be no significant differences between the scores on a standardized English test for the tutors and similar students who did not serve as tutors as measured by the California Achievement Test, 1977 Edition (CAT-77).

Rationale for Study

The rationale for this study was developed on the basis of several assumptions. First, peer tutoring provides a flexible teaching/learning technique and offers advantages to both the tutors and the tutees in that additional "time on task" would be used by the tutor to better learn and more completely understand the tasks he was responsible for teaching. Increased "time on task" would be used by the tutee to review and learn new information on a one on one basis with immediate feed back available to him from the tutor.

It was assumed that the one year age difference between the seventh grade tutors and the sixth grade tutors would encourage a closer working relationship than would be the case if the age difference were greater. The close relationship between these groups was seen as a significant feature for improved and increased communication as well as for the development of the "significant other" concept.

In addition, it was assumed that the peer tutoring program would be of most value to the participants as an integral part of a well-planned and closely supervised English class. Short and frequent sessions were judged to be of greater value than long infrequent sessions.

It was also assumed that orientation sessions for both the tutors and the tutees would help both groups to understand the goals and expectations of peer tutoring. Frequent evaluation and discussion sessions would help to insure continued understanding of the program and continued growth and

effectiveness in the interaction and communication processes which are essential features of peer tutoring.

Candler, Blackburn, and Sowell (1981) agreed that peer tutoring offered a number of advantages for both the teachers and the students. They pointed out that the greatest advantage was that it provided a flexible instructional strategy which enabled the teacher to work with one student or a group of students who need assistance. At the same time, tutors could be working with other students in the class.

Tutoring has been found to be beneficial to all students who were involved. Pierce (1982) stated that a tutor's academic abilities are enhanced because a deeper understanding of the subject was required to be able to teach another person. Students who were willing to assume this responsibility were motivated to improve their academic performance. In addition, association with the role of the teacher may increase a child's self-esteem and positive attitudes toward school. Tutors judge themselves as being more competent in school after teaching another child.

In a discussion of peer tutoring, Bohning (1980) pointed out increased motivation and a more positive attitude toward all learning as benefits for both the tutor and the tutee. These factors in turn contribute directly and positively to the learning atmosphere in the classroom. Thus the teacher, the tutor, and the tutee all benefit.

There are several advantages associated with a well-planned and directed tutorial program. Melaragno (1976) in-

dicated three of them. First, tutees receive far more individual attention. Second, the tutors improved their skills; and third, the participants show increased motivation and enthusiasm for learning.

In a discussion of tutoring in a reading class, Hiebart (1980) pointed out that the use of peer directed activities could multiply learning opportunities 20 to 30 times. In addition, when peers were viewed as a positive rather than a negative force in the classroom, a "teacher versus peers" situation was avoided. This valuable resource which is available in all classrooms may not be used because of a lack of training and understanding by the classroom teacher.

Limitations

This study utilized a quazi-experimental research design. Since the subjects for this study were already enrolled in ongoing instructional programs, they could not be randomly selected. The tutees were students who needed help in English. The tutors were selected because of their ability to provide this help. Random selection was used for the assignment of subjects to the experimental and control groups.

REVIEW OF RELATED LITERATURE

This study was directed toward determining the effects of tutorial programs on motivation to improve grades, self-concept, and achievement. As a consequence, the recent literature related to these factors was examined.

The Effects of Tutoring on Motivation

Young school age children teach each other to do any number of things such as to play ball, build models, and sing songs. As children learn to play together, they are also learning other important lessons such as sharing, communication, and interaction skills.

Children remain willing and motivated to learn from each other. Recent evidence points in the direction of the beneficial effects on student motivation as they assumed the job of the teacher. Blaney, Stephan, Rosenfield, Aronson, and Sikes (1977) described an experiment in an elementary classroom in which each child performed the role of the teacher and successfully taught a brief unit of information to a small group of students. In a review studies related to peer-tutoring, Devin-Sheerhan, Feldman, and Allen (1976) supported the position that tutoring enhances the instructional process.

Other studies suggested that instructional time may not be fully utilized because students found it necessary to wait in order to have a question answered or receive clarification of instructions. Hiebert (1980) reported that peer-tutoring,

which enabled students to draw upon one another's expertise, may be a solution to this kind of problem. Increased time on task through the use of this technique improved grades. These and similar instructional tasks could be carried out as peer-directed activities. Opportunities to assume increased responsibility for their own learning and that of others served as motivational factors for students. Thus, peer-tutoring helped students to become more self-directed. Berhman (1973) suggested that tutoring programs increased student motivation and his self-concept.

Hill and Tanveer (1981) conducted a study in which 38 tutors and 38 tutees were involved in sessions related to mathematics. The tutors were in the sixth grade, and they were helping second and third graders. While the results were mixed regarding the effectiveness of peer-tutoring, this study indicated that tutoring may increase motivation, achievement, and self-direction of pupils.

Cohen and Kulik (1981) reviewed and summarized 65 studies related to tutoring. Eight of the studies dealt with the attitude of the tutees toward subject matter they had been taught. In all eight of the studies, student attitudes toward the subject matter were more positive in classrooms with a tutorial program. Only one of the eight studies reported a statistically significant difference.

The data from these studies were also treated with Glass's (1976) Effect Size (ES). This index gives the number of standard deviation units that separate the group averages being

compared. The index is defined as the difference between the means of two groups divided by the standard deviation of the control group and was used to describe more precisely the influence of tutoring on the examination scores. The average ES for the eight studies was .29. This was judged to indicate that tutoring programs had a positive effect on the tutees attitudes toward the subject being taught.

Five of the 65 studies reviewed investigated the effects of tutor attitudes toward the subject matter they were teaching. In four of these studies, attitudes were more positive for the tutors. One of the four studies reported a statistically significant difference in subject matter attitudes, and this was in favor of the tutors. An ES for attitude toward the subject of .42 was considered to be of moderate size.

The Effects of Tutoring on Self-Concept

In addition to other benefits associated with a tutorial program, both the tutors and the tutees seem to have developed more positive attitudes toward school and toward themselves. Although most programs were designed to help the tutee, the tutor may have received greater benefits than the tutee in some programs.

Price and Dequine (1982) studied a program in which low-achieving students served as tutors in a reading class for non-English speaking students. As a result of this experience, the tutors experienced significant gains in self-esteem, basic reading skills, and vocabulary.

Steinberg and Cazden (1979) reported a study in which they pointed to the unusual ability of the tutor to deal with problems associated with the instructional task. The tutoring role may cause increased effort and concentration as the teaching job is assumed. The "troublemaker" may exhibit more acceptable behavior. The quiet and passive student may become more positive and outgoing.

Gartner, Kohler, and Riessman (1971) reported that tutoring may produce academic gains and positive attitude changes in the tutor. Other benefits included heightened self-esteem and increased motivation to learn.

Bierman and Furman (1981) reported a study which involved 112 fourth grade students in a foreign language program. The results of the study indicated that children enacting tutor roles tended to form more positive attitudes than children in tutee roles and that role had a major impact on attitudes. It was felt that children associated the role of the tutor with characteristics such as competence and prestige. In the course of enacting those roles, they applied these characteristics to themselves; and, thus, positively influenced their self-perceptions. While the actual ability of the tutee was better on achievement tests, they did not feel as smart, quick, or skillful as the tutors did.

Lazerson (1980) conducted a study which examined gains in self-concept and improvement in behavior for sixty students. Both aggressive and withdrawn children were selected for the study and paired with other students with similar problems.

At the end of the five week experiment, almost all active participants showed higher gains than the control group in the self-concepts and made greater behavioral improvements. In addition, there was an increased interest in school and in the learning process. A study by Baldwin (1975) agreed that peer-tutoring increased interest in the school process.

Cohen and Kulik (1981) summarized 65 studies associated with the effects of tutoring. Nine of the 65 studies dealt with the effects of tutoring programs on tutee self-concept. In seven of the studies, self-concepts were more favorable for students in classrooms with tutoring programs. The ES was .09 and was large enough to be statistically reliable.

Sixteen of the studies summarized by Cohen and Kulik related to the self-concept of the tutors. In 12 of the studies, the self-concept was higher for tutors. In four of them, the self-concept was higher for the control group. Four studies indicated statistically significant differences in favor of the student tutors. The ES for self-concept was .18 and was considered to have small effect.

Hailey (1981) conducted a study which involved 104 students. His study dealt with the effects of cross-age tutoring on self-concept and mathematics achievement. Fifty-two high achieving eighth grade mathematics students and 52 low achieving fourth grade students were randomly selected as subjects. The eighth grade and fourth grade students were then randomly divided and assigned to the experimental and control groups. The experimental group was involved in tu-

torial sessions for 30 minutes each day, three days each week for a six week period.

No significant difference was reported for achievement or self-concept for the tutors as compared to those eighth grade students who did not tutor. A significant difference was found for achievement and self-concept for the tutees as compared with students who were not tutored at the .05 level.

The Effects of Tutoring on Achievement

Gains in achievement by the tutees have been the focal point of many studies related to tutorial programs. More recent studies have been concerned with improvements in achievement for both the tutor and the tutee.

Reed (1976) reported that, as a result of being involved, tutors reinforced their own knowledge when they prepared the materials to teach, which, in turn, enhances their self-confidence and self-esteem. The tutees received individualized instruction, had opportunities to interact with students who may have overcome similar problems, and therefore, discover and reinforce their own unique strengths. Thus, the tutees received a boost in self-confidence in addition to association with a role model.

Some studies supported positive gains in achievement while others found no specific increase in achievement as a result of tutoring. Bierman and Furman (1981) supported these findings and also indicated that the reasons for success or failure of any one program are unclear.

Collins and Caleuro (1974) found that after three months of tutoring, the tutees' achievement level in mathematics ranged from 4.8 to 14.6 months for each month of tutoring. Klann (1975) supported tutoring as a way to increase the reading achievement levels of students who were eligible for special education services.

Pierce (1982) reported increased competence in academic areas as a benefit of tutoring. In addition, other positive advantages were suggested. Tutees received increased individualized attention, influence of a role model, and gains in self-esteem. The tutor improved his knowledge of the subject and his social skills. Benefits for the teacher included increased opportunity to individualize instruction, increased pairing and consulting with other teachers, and the development of more positive attitudes among students and between students and teachers.

Cohen and Kulik (1981) reported a summary of sixty-five research studies which dealt with the effects of tutoring. Fifty-two of the studies described effects of the program on examination scores of students who received tutoring. In 87 percent of those studies, the tutors out performed the control groups. Of the studies which reported statistically significant differences between teaching approaches, 95 per cent favored the students with tutoring programs. A distinct majority of these studies supported the positive effect of tutoring programs on the tutee achievement.

The average ES in the 52 students reviewed by Cohen and Kulik (1981) was .40. This implies that in a typical study, tutoring raised the performance of students by two-fifths of a standard deviation unit, or from the 50th to the 66th percentile. It also implies that 66 per cent of the students in classrooms with tutoring programs out performed the average student in a control classroom.

Thirty-eight of the 65 studies reviewed by Cohen and Kulik (1981) dealt with the effects of tutoring on the examination scores of students who served as tutors. In almost 90 per cent of the studies, tutors performed better than the control group. Ten of the 38 studies reported statistically significant results in favor of students who served as tutors. The average ES in the 38 studies was .33. This was large enough to move tutors from the 50th to the 63rd percentile on examinations in the subject matter they were teaching.

Summary

Peer tutoring is a worthwhile and valuable technique for use in the classroom. Evidence has been collected which indicates that this flexible instructional tool can add measurably to motivation, self-concept, and achievement of students. It can also be used as a means of helping students to accept responsibility and to gain an increased sense of self-worth and social understanding. The tutorial program clearly provides benefits for both the tutor and the tutee.

Tutorial programs have strong and positive effects on the achievement and motivation of the tutee. Tutored students

have more positive self-concepts and attitudes toward school than their peers.

Tutoring programs also have positive effects on the tutors. Higher achievement and motivation gains were reported for tutors than for those students in the control groups.

METHODS AND PROCEDURES

This study was concerned with an assessment of the benefits of peer tutoring when it was used in middle school English classes. In order to determine the effects of the tutorial program on motivation to improve grades, self-concept, and achievement, it was necessary to establish a research design. This portion of the study was divided into four parts: (1) Subjects of the Study, (2) Data Gathering Instruments, (3) Procedures, and (4) Analysis of the Data.

Subjects of the Study

The setting for this study was a middle school, which was part of a public school system located in northeast Mississippi. Students enrolled in English classes were grouped into three levels using data from the California Achievement Test, 1977 Edition. Thirty of these students were randomly assigned to the experimental group and 30 of them were randomly assigned to the control group.

The tutor sample consisted of 60 seventh grade students from Level I and Level II English classes. The Level I group was composed of students who scored at the 72nd percentile or above on the English portion of the California Achievement Test, 1977 Edition. The Level II group was composed of students who scored between the 30th and 71st percentile on the English portion of the California Achievement Test, 1977 Edition. Thirty

of these students were randomly assigned to the experimental group and 30 of them were randomly assigned to the control group.

Data Gathering Instruments

Data for this study were gathered through the use of two instruments and the academic records of students. Pretest and Posttest data were collected for all students involved in this study through the use of Teacher Assigned Grades in English classes, overall grade point average in all other academic classes, the Survey of Pupil Opinion, and the California Achievement Test, 1977 Edition.

Teacher Assigned Grades in English Classes and Overall Grade Point Average in All Other Academic Classes

The literature seemed to support increased student motivation as a benefit of the tutoring process. Hiebert (1980) reported that opportunities to assume increased responsibility for their learning and that of others increased the motivation of both the tutor and the tutee. Berchman (1973) in an earlier study, supported the same position and indicated that tutoring programs increased student motivation; Steinberg and Cazden (1979) reported that assuming the role of the tutor caused increased effort and concentration. In this study the letter grades assigned by teachers to students in English classes and an overall grade point average in all other academic classes were used to determine the motivational effect of the tutorial experience. Gains in grades assigned to the

tutees and the tutors were considered to be an indication of a positive motivational experience. This method was judged to be an adequate measure of the effects of this experience.

Survey of Pupil Opinion

An instrument was needed for the study which would measure self-concept as well as student attitudes toward school work. The Survey of Pupil Opinion was determined to be an appropriate instrument for studying self-concept. It was developed by Kilbane (1972) in the Cleveland, Ohio, public school system and was designed to measure student attitudes toward self and toward school. Of the 30 original items in the instrument, 24 items identified three independent factors. The factors were designated Social Perception (seven items), Perception of Teachers (nine items), and Perception of Self-as-Student (eight items). Test-retest correlations for the total score of the instrument yielded a reliability coefficient of .71. A copy of the SURPO was presented in Appendix A.

Handley (1975) validated the Survey of Pupil Opinion for Mississippi students. The three factors which were present in Kilbane's Ohio study were present in the Mississippi study, but their composition differed. All factors on the SURPO correlated significantly with the overall score on the Tennessee Self-Concept Scale. Test-retest studies noted a reliability coefficient of .82 for the total score on the SURPO. Factors present in the Mississippi study were used to determine changes which may occur in self-concept because of the tutorial experience.

California Achievement Test, 1977 Edition, Forms C and D

An instrument was needed to measure any changes in English achievement as a result of the tutorial experience. The CAT-77 seemed to be an appropriate instrument.

The CAT-77 is a series of tests used for the purpose of assessing skills for six content areas. The series includes, according to Salvia and Ysseldyke (1981), measures of skill development in prereading, reading, spelling, language, mathematics, and the use of references. There are two forms of the test (CAT C and D) with ten overlapping levels.

Level 10 which is a prereading test is a revision of the earlier Comprehensive Test of Basic Skills. Levels 11 to 19 are based on the tradition of the earlier California Achievement Test (Tiegs and Clark, 1970). The test is not a revision, (CTB/McGraw-Hill, 1979) but is entirely new, with new structure and items.

The language portion of the CAT-77 was divided into two sections: (1) language mechanics, and (2) language expression. Level 16, form C was used to test the sixth grade students. Level 17, form C was used to test the seventh grade.

The language mechanics portion of the test of Level 16C and Level 17C was composed of 25 items with a total completion time of 15 minutes. The language expression portion of 16C and 17C was composed of 38 items with a total completion time of 27 minutes.

The test-retest correlations for the total score on the language section of Level 16, form C yielded a reliability co-

efficient of .84 (CTB/McGraw-Hill, 1979). The test-retest correlations for the total score on the language section of Level 17, form C yielded a reliability coefficient of .87 (CTB/McGraw-Hill, 1979).

Procedures

The California Achievement Test, 1977 Edition was taken by all students in the fifth and the sixth grades during 1982. Data from the English portion of this test were used as a pretest to determine the achievement level of students in English.

The tutee group consisted of 60 Level III sixth grade students who scored at the 35th percentile or below on the California Achievement Test, 1977 Edition. The tutor group consisted of 60 Level I and Level II seventh grade students. Those in Level I scored at or above the 62nd percentile and those in Level II scored between the 30th and the 71st percentile on the California Achievement Test, 1977 Edition. A table of random numbers was used to assign students to the experimental and control groups during February, 1983.

During February, 1983, teacher assigned grades in English and in all other academic subjects as shown on the report cards for that six weeks marking period were checked. These grades were used as a pretest to determine the motivational level of the students. During the same time period the Survey of Pupil Opinion was given to the participants. The pretest scores were used to show any changes in student self-concept which was caused as a result of the tutor and the tutee experience.

During February, 1982, two 30 minute orientation periods were developed and held for the tutors before the program began. Some of the materials were adapted from those developed by Hailey (1981). Goals for the program and specific tasks for the achievement of those goals were discussed. The topics included the purposes and characteristics of a tutorial program, the importance of the first meeting with the tutee, suggestions for a successful tutor, the importance of a positive attitude, and how to be an effective helper and friend. Each tutor was given a small notebook in which he was asked to keep a daily record of the tutoring sessions. They were encouraged to find something positive to include in each day's account. The daily logs were used as a basis of discussion during the evaluation sessions between the tutors and the teacher.

Two 30 minute orientation periods were also held separately for the tutees prior to beginning the tutorial program. Some of the same topics were discussed, but from the viewpoint of the tutee. These topics included the purposes and characteristics of a tutorial program, the importance of the first meeting with the tutor, how to be a friend, suggestions for a successful tutee, and the importance of a positive attitude. References were made to the program as being something new and exciting. The tutors were referred to as "partners."

After the tutorial program began, evaluation meetings were held separately for the tutors and the tutees. The meetings were for the purpose of answering questions and dealing with

problems that either group may have been having. It was necessary at times to hold these meetings during student "free time." Snacks were sometimes served as rewards.

The program began during the fourth week in February, 1983. The sixth grade tutees received 15 minutes of individual instruction each day for a period of six weeks. Five minutes of this time could be used introducing and closing the lesson if needed. The remaining 10 minutes were planned as an intensive instructional period.

The tutorial sessions were closely correlated with the other English classes. During these meetings the tutee was always ready with the assignment when the tutor came into the classroom. The assignments sometimes involved skill sheets. Other sessions involved writing assignments. Tutorial assignments were collected and treated in the same way as other classwork. If the assigned task was completed ahead of schedule, the students were to review other lessons for the week. The tutorial classes were closely supervised by the teachers.

The sixth grade tutees, which included the experimental and control groups were taught the same material and in the same way by the classroom English teachers. The assignments and teaching techniques were the same for both groups. The sixth grade teachers worked with the tutors in solving problems associated with their instruction role.

In April 1983, the six week instructional period ended. Teacher assigned grades in English and in all other academic classes were secured and used as one posttest measure of stu-

dent motivation for the experimental and control groups. The Survey of Pupil Opinion was given to the experimental and control groups and was used as a posttest measure of changes in pupil self-concept. The California Achievement Test, 1977 Edition was given to the experimental and control groups. It was used as a posttest measure of any changes in the English achievement scores.

Analysis of Data

The analysis of variance was used to analyze the data. The .05 level of significance was used to evaluate the relevant *F* ratios. The same analysis technique was used for all eight hypotheses.

IV

ANALYSIS OF DATA

This research study was designed to assess the benefits of peer tutoring for the tutors and tutees in middle school English classes. The students involved in the study were selected from sixth and seventh grade levels.

The tutees were selected from low achieving sixth grade students. The 60 tutees were randomly assigned to experimental and control groups. The 60 tutees were selected from high achieving seventh grade students. The tutors were randomly assigned to experimental and control groups of 30 each.

Pretests to measure achievement and self-concept were given to both the experimental and control groups. Posttests to measure achievement and self-concept were given to both the experimental and control groups at the end of the 6 week treatment period.

Results of Analysis of Variance

The first null hypothesis stated that there would be no significant difference in English achievement between tutees and similar students who were not tutored as measured by teacher assigned grades. In Table 1, the adjusted means and *F* ratio comparing adjusted posttest means in English achievement as measured by teacher assigned grades for sixth grade subjects are shown. The adjusted mean for the experimental group was 2.52, and the adjusted mean for the control group was 2.08.

Table 1

Difference Between Experimental and Control Groups of Tutees on Teacher Assigned Grades in English, Overall Academic Grade Point Average, Self-Concept, and Standardized English Test Scores

Variable	Experimental Adjusted $\bar{X}$	Control Adjusted $\bar{X}$	F
Teacher Assigned Grades in English	2.52	2.08	5.59*
Overall Academic Grade Point Average	2.30	2.30	.00
Self-Concept (SURPO)	62.80	63.51	.10
Standardized English Test Scores (CAT-77)	459.87	469.49	1.07

*Significant at the .05 level.

The F ratio was 5.59. Therefore, null hypothesis 1 was rejected at the .05 level since sixth grade students who were tutored in English achieved significant gains in teacher assigned grades in English class when compared to sixth grade students who were not tutored.

The second null hypothesis stated there would be no significant difference in the Overall Grade Point between the tutees and similar students who were not tutored as measured by all teacher assigned academic grades. In Table 1, the adjusted means and F ratio comparing adjusted posttest means in overall grade point average as measured by all teacher assigned academic grades are shown. The adjusted mean for the experimental group was 2.30, and the adjusted mean for the control group was 2.30. The F ratio was 0.00. Therefore, null hypothesis 2 was not rejected since no significant difference in the overall academic grade point average was found to exist between sixth graders who were tutored and those who were not tutored.

The third null hypothesis stated there would be no significant difference in the self-concept of the tutees and similar students who were not tutored as measured by the Survey of Pupil Opinion. In Table 1, the adjusted means and F ratio comparing adjusted posttest means in self-concept for the tutees are presented. The adjusted mean for the experimental group was 62.80, and the adjusted mean for the control group was 63.51. The F ratio was 0.10. Therefore, null hypothesis 3 was not rejected since no significant difference in self-concept was found to exist between sixth grade students who were tutored and those who were not tutored.

The fourth null hypothesis stated there would be no significant difference in the scores on a standardized English test for the tutees and similar students who were not tutored as measured by the California Achievement Test, 1977 Edition. In Table 1, the adjusted means and F ratio comparing adjusted posttest means in English for the tutees are presented. The adjusted mean for the experimental group was 459.87, and the adjusted mean for the control group was 469.49. The F ratio was 1.07. Therefore, null hypothesis 4 was not rejected since no significant difference in standardized English test scores was found to exist between sixth grade students who were tutored and those who were not tutored.

The fifth null hypothesis stated there would be no significant difference in English achievement between the tutors and similar students who did not serve as tutors as measured by teacher assigned grades. In Table 2, the adjusted means and F ratio comparing adjusted posttest means in English achievement as measured by teacher assigned grades for the seventh grade students are shown. The adjusted mean for the experimental group was 2.36, and the adjusted mean for the control group was 2.29. The F ratio was .07. Therefore, null hypothesis 5 was not rejected since no significant difference in teacher assigned grades in English class was found to exist between seventh graders who had served as tutors and those who had not served as tutors.

The seventh null hypothesis stated there would be no significant difference in the self-concept of tutors and similar students who did not serve as tutors as measured by the Sur-

Table 2

Difference Between Experimental and Control Groups of Tutors on Teacher Assigned Grades in English, Overall Academic Grade Point Average, Self-Concept, and Standardized English Test Scores

Variable	Experimental Adjusted $\bar{X}$	Control Adjusted $\bar{X}$	F
Teacher Assigned Grades in English	583.74	574.92	.56
Overall Academic Grade Point Average	2.32	1.90	.11
Self-Concept (SURPO)	62.75	62.04	.18
Standardized English Test Scores (CAT-77)	583.74	574.92	.56

vey of Pupil Opinion. In Table 2, the adjusted means and F ratio comparing adjusted posttest means in self-concept for the tutors are presented. The adjusted mean for the experimental group was 62.75, and the adjusted mean for the control group was 62.04. The F ratio was .18. Therefore, null hypothesis 7 was not rejected since no significant difference in self-concept was found to exist between seventh graders who served as tutors and those who did not serve as tutors.

The eighth null hypotheseis stated there would be no significant difference in the scores on a standardized English test for tutors and similar students who did not serve as tutors as measured by the California Achievement Test, 1977 Edition. In Table 2, the adjusted means and F ratio comparing adjusted posttest means in English for the tutors are presented. The adjusted mean for the experimental group was 583.74, and the adjusted mean for the control group was 574.92. The F ratio was .56. Therefore, null hypothesis 8 was not rejected since no significant difference in standardized English test scores was found to exist between seventh grade students who served as tutors and those who did not serve as tutors.

V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the effects of peer tutoring in middle school English classes on the tutors and tutees as determined by teacher assigned grades in English classes, overall academic grade point average, self-concept as measured by the Survey of Pupil Opinion, and scores on a standardized English test as measured by the California Achievement Test, 1977 Edition. The tutee sample consisted of 60 Level III sixth grade middle school students who scored at the 35th percentile or below on the English portion of the California Achievement Test, 1977 Edition. Thirty of these students were randomly assigned to the experimental group, and 30 of them were randomly assigned to the control group. The tutor sample consisted of 60 seventh grade students from Level I and Level II English classes. The Level I group was composed of students who scored between the 30th and 71st percentile on the English portion of the California Achievement Test, 1977 Edition. Thirty students were randomly assigned to the experimental group, and 30 of them were randomly assigned to the control group.

Pretest and posttest data were collected for all students in this study through the use of teacher assigned grades in English classes, overall grade point average in all other academic classes, the Survey of Pupil Opinion, and the California

Achievement Test, 1977 Edition. The tutorial program lasted for a six week period. These data were treated with the analysis of variance.

Conclusions

This study involved the formulation of eight null hypotheses. When the data were treated with analysis of variance no significant difference was found at the .05 level when comparisons were made between overall academic grade point average, self-concept, and scores on a standardized English test for students who were tutees when compared with students who were not tutees. A significant difference was found at the .05 level when a comparison was made between teacher assigned grades in English class for students who were tutees when compared with students who were not tutees in favor of the tutees.

No significant difference was found at the .05 level when comparisons were made between teacher assigned grades in English class, overall academic grade point average, self-concept, and scores on a standardized English test for students who served as tutors when compared with similar students who did not serve as tutors.

Implications

The present study appears to support the hypothesis that the peer tutoring process in a middle school English class improves the grades assigned by teachers to the tutees. These data do not appear to support similar benefits for the tutors.

In addition, other positive factors associated with peer tutoring for both the tutee and the tutor in other subject areas and at lower grade level were not supported by this study. Involvement in the peer tutoring process did not significantly effect the overall grade point average, self-concept, or the scores on standardized English tests for the tutees or the tutors.

It seems noteworthy that positive interpersonal relationships were developed during this 6 week period. Observation of the experimental group indicated a willingness by the tutors to provide appropriate assistance for the tutees. The tutees seemed willing to learn from the tutors and were appreciative of their efforts.

Recommendations

Based on the analysis of these data, the following recommendations were made:

1. This study was conducted for a 6 week period. A similar study should be conducted over an extended period of time and during a different time of the school year.

2. Since there is a limited amount of research related to the effectiveness of the tutorial process in the English classroom at the Middle School level, similar studies need to be conducted with a different population.

APPENDIX A

Division of Research and Development
Cleveland Public Schools

SURVEY OF PUPIL OPINION

Here are some statements about school. Read each statement carefully and then mark the space on your answer sheet that shows how you feel about the statement. There are no wrong answers. Your true opinion whatever it is, is the right answer.

Mark only one answer for each statement. Do not skip any questions. Be sure that the number on the answer sheet matches the question number when you mark your answer. There is no limit. You will be given as much time as you need to answer all the questions. When you finish one page, go on to the next page.

There are five answer spaces for each question. The answer spaces are lettered from A to E like this: A B C D E.

Use this key to mark your answers:

A-Always B-Most of the time C-Sometimes, D-Hardly Ever E-Never

Circle the letter which best describes how you feel.

1.	Chances are good that I'll succeed in school.	A	B	C	D	E
2.	I like to read.	A	B	C	D	E
3.	Teachers are fair.	A	B	C	D	E
4.	School is a waste of time.	A	B	C	D	E
5.	My parents look at my report card.	A	B	C	D	E
6.	I think school is fun.	A	B	C	D	E
7.	The school rules make sense.	A	B	C	D	E
8.	I have a good time in school.	A	B	C	D	E
9.	Students in this school are friendly.	A	B	C	D	E
10.	I watch the clock during class.	A	B	C	D	E
11.	I think I'm doing better in school this year than I did last year.	A	B	C	D	E
12.	I do my assignments on time.	A	B	C	D	E

SURVEY OF PUPIL OPINION—continued

Use this key to mark your answers:

A-Always	B-Most of the time	C-Sometimes	D-Hardly Ever	E-Never

13.	Teachers expect too much of students.	A	B	C	D	E
14.	I ask my teachers for help.	A	B	C	D	E
15.	My teachers understand me.	A	B	C	D	E
16.	School is boring.	A	B	C	D	E
17.	I take my schoolwork seriously.	A	B	C	D	E
18.	Teachers give me the help I need in school.	A	B	C	D	E
19.	My teachers play favorites.	A	B	C	D	E
20.	I like my teachers.	A	B	C	D	E
21.	My teachers pick on me.	A	B	C	D	E
22.	My teachers can take a joke.	A	B	C	D	E
23.	I look forward to my classes.	A	B	C	D	E
24.	Teachers are too strict.	A	B	C	D	E
25.	My parents like my school.	A	B	C	D	E
26.	I get along well with my teachers.	A	B	C	D	E
27.	I wish I could quit school.	A	B	C	D	E
28.	I come to school on time.	A	B	C	D	E
29.	I get along well with other students.	A	B	C	D	E
30.	Teachers are friendly.	A	B	C	D	E

APPENDIX B

SAMPLE WORK SHEETS

Name _____

A prefix is a group of letters added at the beginning of a word.

re paint un able sub way en able

A suffix is a group of letters added to the end of a word.

quick ly joy ful care less wash able

A. Circle the prefix or suffix in each word.

endear	helpful	submarine
reword	unsafe	safely
drinkable	harmless	thoughtless
encamp	unfair	cheerful

B. Write each word that has a prefix in the first box.
Write each word that has a suffix in the second box.

Prefix	Suffix
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

The prefix un adds the meaning "not".
The prefix sub adds the meaning "under".
The prefix en adds the meaning "to make".

Name _____

A. Underline any word that has a prefix. Circle the prefix.

1. subsoil	2. endear	3. unlucky
4. dearest	5. supper	6. enclose
7. submarine	8. unable	9. unclear

B. Finish the puzzle. Use the words you underlined.

Across

1. Part of the Earth just below the soil

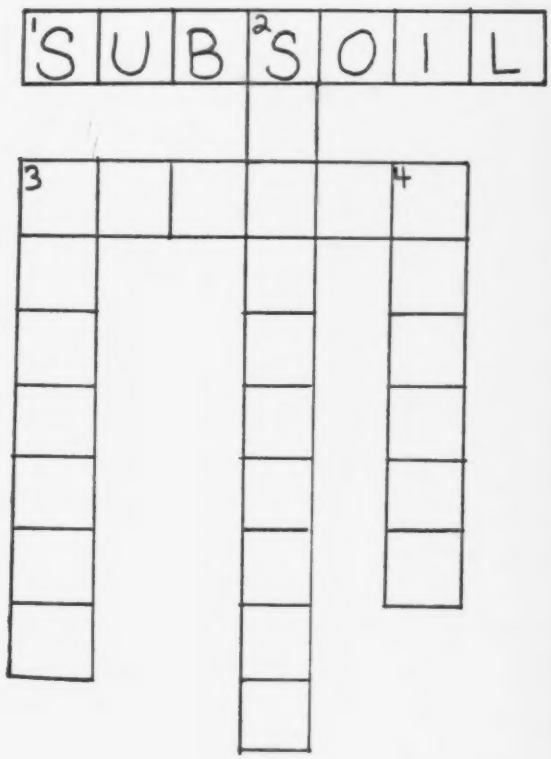
3. Word meaning "not able"

Down

2. A boat that can go under water

3. Word meaning "not lucky"

4. Word meaning "to make dear"



C. Write ten words with prefixes.

D. Write ten words with suffixes.

"We are an equal opportunity employment company. We are dedicated to a policy of non-discrimination in employment on any basis including race, creed, color, age, sex, religion or national origin; or physical defects"

APPLICATION FOR EMPLOYMENT

PERSONAL INFORMATION

Date

Name
Last First Middle

Present Address
Street City State Zip

Permanent Address
Street City State Zip

Phone No. Social Security Number

EMPLOYMENT DESIRED

Position Date You Can Start Salary Expected

Are You Employed Now? If So May We Contact Present Employer?

Ever Applied To This Company Before? Where? When?

EDUCATION	Name and Location of School	Years Attended	Graduated	Subjects Studied
Grammar School				
High School				
College				
Trade, Business or Correspondence School				

Subjects of Special Study or Research Work

U. S. Military or Naval Service Rank Present Membership in National Guard or Reserve

Activities Other Than Religious (Civic, Athletic, Fraternal, etc.)

FORMER EMPLOYERS (List Below Last Four Employers, Starting With Last One.)

Date Month and Year	Name and Address of Employer	Salary	Position	Reason for Leaving
From To				
From To				
From To				
From To				

REFERENCES: Give below the names of two persons not related to you, whom you have known at least one year.

Name	Address	Business	Years Acquainted
1.			
2.			

TO BE COMPLETED DAY EMPLOYMENT BEGINS Date _____

Height Weight Age Date of Birth

Single Married Widowed Citizen U. S. A. Sex

The above information needed for pension, hospitalization, insurance, etc.

Interviewed by Date Remarks

Neatness		Character	
Personality		Ability	

Hired For Dept. Position Will Report Salary

Approved: 1. 2. 3.

Employment Manager Dept. Head General Manager

In case of emergency notify

Name Address Phone No.

I authorize investigation of all statements contained in this application. I understand that misrepresentation or omission of facts called for is cause for dismissal. Further, I understand and agree that my employment is for no definite period and may, regardless of the date of payment of my wages and salary, be terminated at any time without any previous notice.

Date Signature

Name _____

Addresses

Rewrite each address below. Use abbreviations.

1. 123 East Main Street _____
2. 456 West Beacon Avenue _____
3. 7890 North Hanley Boulevard _____
4. 32 South Friendship Avenue _____
5. 8 Wellington Avenue _____
6. 47 Portland Street _____
7. 880 East Fortune Street _____
8. 9087 West Alamo Boulevard _____

Write each address below the long way.

9. 45 E. Ninth St. _____
10. 325 W. Freer Blvd. _____
11. 1889 S. Sixteenth Ave. _____
12. 2335 N. Main St. _____

Write two titles for each person below.

13. An unmarried woman _____
14. A married woman _____

Write one title for each person.

15. A doctor _____ 16. A married man _____

*Finding Information

Look at a calendar. Find six holidays. Write the names and dates of the holidays. Use a separate sheet of paper.

Name _____ Date _____

Commas in Friendly Letters

1. Add commas to these letters. Use four commas in each letter.
2. Write a message for each letter.

25 East Fortune St.
Edina LA 77777
May 23 19__

Dear Carrie

Sincerely

Ella

457 Fristee Ave.
Mortonville MA 01111
July 4 19__

Dear Gerry

Your friend

Martin

REFERENCES

Behrman, P. One plus one equals success. Journal of Learning Disabilities, February 1973, 6, 123-124.

Bierman, K. & Furman, W. Effects of role and assignment rationale on attitudes formed during peer tutoring. Journal of Educational Psychology, Fall 1981, 73, 33-40.

Blaney, N. T., Stephan, C., Rosenfield, D., Aronson, E., & Sikes, J. Interdependence in the classroom: a field study. Journal of Educational Psychology, 1977, 67, 121-128.

Bohning, G. Peer tutoring: two are better than one. Paper presented at the Florida State Reading Council Annual Conference, St. Petersburg, 1980.

Candler, A., Blackburn, G., and Sowell, V. Peer tutoring as a strategy individualizing instruction. Education, Summer 1981, 101, 380-383.

Cohen, P. & Kulik, J. Synthesis of research on the effects of tutoring. Educational Leadership, December 1981, 227-229.

Collins, J. & Calevro, M. Mainstreaming special education using a peer tutoring system and a minimum objective curriculum for nine eighth grade students. 1974. (Eric Document Reproduction Service No. ED 102-788)

CTB/McGraw-Hill. California Achievement Tests. Montery, California: 1979.

Devin-Sheehan, L., Feldman, R. S. & Allen, V. L. Research on children tutoring children: a critical review. Review of Educational Research, 1976, 46, 355-386.

Gartner, A., Kohler, M., Riessman, F. Children teach children: Learning by teaching. Englewood Cliffs, New Jersey: Harper & Row, 1971.

Glass, G. Primary, secondary and meta-analysis of research. Educational Researcher, 1976, 5, 3-8.

Hailey, L. The effects of cross-age tutoring on self-concept and mathematics achievement. Unpublished doctoral dissertation, Mississippi State University, 1981.

Handley, H. M. Influence of modern vocational programs on the attitudes of rural disadvantaged adolescents. Research and Curriculum Unit for Vocational and Technical Education, Mississippi State University, College of Education, 1975.

Hiebart, E. H. Peers as reading teachers. Language Arts, November 1980, 57, 877-881.

Hill, J. & Sardar, A. Kids teaching kids: it works. Educational Forum, May 1981, 45, 425-432.

Kilbane, M. T. Development of an instrument to assess attitudes of high school students in compensatory programs. Paper presented at the American Educational Research Association Meeting, Chicago, 1972.

Klann, H. The effects of utilizing teen tutors in a fourth and fifth grade individualized reading program. (Eric Document Reproduction Service No. 090-458)

Lazerson, D. I must be good if I can teach-peer tutoring with aggressive and withdrawn children. Journal of Learning Disabilities, March 1980, 13, 43-48.

Melaragno, R. J. Tutoring with students. Englewood Cliffs, New Jersey: Educational Technology Publications, 1976.

Pierce, M. Partner learning: concept and rationale. Paper presented at the International Convention of the Council for Exceptional Children Meeting, Houston, 1982.

Price, K. & Dequine, M. Peer tutoring: it builds skills and self-concept. Academic Therapy, January 1982, 17, 365-371.

Reed, F. Peer tutoring programs for the academically deficient student in higher education. 1976. (Eric Document Reproduction Service No. ED 113-981)

Saliva, J. & Ysseldyke, J. E. Assessment in Special and Remedial Education (2nd ed.). Dallas: Houghton Mifflin Company, 1981.

Tiegs, E. W. & Clark W. U. California Achievement Tests, 1970 Edition. Monterey, California: CTB/McGraw-Hill, 1970.